IN THE UNITED STATES DISTRICT COURT
FOR THE NORTHERN DISTRICT OF ILLINOIS
EASTERN DIVISION

MARILYN F. QUIRIN, as Executor of the Estate of RONALD J. QUIRIN, Deceased, Plaintiff, v. LORILLARD TOBACCO CO., et al., Defendants.	)	Civil Action No. 1:13-cv-02633 Judge Joan B. Gottschall

DEFENDANT GEORGIA-PACIFIC LLC'S MOTION *IN LIMINE NO. 1* TO EXCLUDE PLAINTIFF'S EXPERTS' EACH AND EVERY EXPOSURE TESTIMONY

Pursuant to Rules 702 and 703 of the Federal Rules of Evidence and *Daubert v. Merrell Dow Pharmaceuticals, Inc.*, 509 U.S. 579 (1993), Defendant Georgia-Pacific LLC ("Georgia-Pacific") moves this Court *in limine* to exclude any testimony from Plaintiff's experts or argument by counsel stating that "each and every exposure" to chrysotile fibers from Georgia-Pacific joint compound was a substantial contributing factor in causing Ronald Quirin's disease.

I. INTRODUCTION

In 2011, Ronald Quirin was diagnosed with pleural mesothelioma, a rare cancer of the lining of the lung. Plaintiff contends that Mr. Quirin's disease was caused by his alleged exposure to asbestos-containing products, including Georgia-Pacific joint compound.

Plaintiff has retained Carl Brodkin, M.D., and Arnold Brody, Ph.D., as causation experts. Dr. Brodkin opines that Mr. Quirin's alleged exposures to chrysotile from Georgia-Pacific products were "significant" and a "substantial cause" of his mesothelioma, without regard to the likely dose, if any, of his alleged exposures. Without evidence of dose, Dr. Brodkin must resort to a heavily criticized "each and every exposure" or "cumulative exposure" theory to arrive at his

causation opinions.[1] Dr. Brody does not propose to proffer specific causation opinions, but, if allowed, would opine that every exposure above background, which is the level of asbestos fibers in the ambient air, is a significant contributing cause of mesothelioma. These experts' theory is that all exposures to asbestos, regardless of dose or fiber type, are causative. This is a truly novel, untested, and untestable proposition – created by and for asbestos plaintiffs' experts – which disregards the primary tenet of toxicology: that "the dose makes the poison."

II. FACTUAL BACKGROUND

A. Mesothelioma and Asbestos

Mesothelioma is a rare cancer arising in the mesothelium, a protective lining that covers the chest and the abdominal cavity. There are some known and suspected causes of mesothelioma, such as the fibrous silicate erionite, amphibole asbestos,[2] and ionizing radiation.[3] Further, a considerable percentage of mesotheliomas have no known cause (are idiopathic).[4]

Asbestos is a generic term for a group of naturally-occurring minerals. Through the process of natural erosion from wind and weather, and as a result of urban development, asbestos is everywhere. The typical lifetime exposure to asbestos from non-occupational sources for

[1] To the extent Plaintiff's experts may try to characterize their opinion as a "cumulative exposure" causation theory, it is similarly flawed and inadmissible. At heart, their opinion is still that any exposure, no matter how small, to any asbestos-containing product, was a substantial contributing cause of Mr. Quirin's mesothelioma. *Compare Georgia-Pacific Corp. v. Stephens*, 239 S.W.3d 304, 314-15 (Tex. App.-Hous. 2007) (finding that expert's "cumulative exposures" opinion was "that every exposure does contribute to the … potential to develop mesothelioma").

[2] CM Yarborough, *Chrysotile as a Cause of Mesothelioma: An Assessment Based on Epidemiology*, 36 CRITICAL REVS. IN TOXICOLOGY 165-187 (2006).

[3] *See, e.g.*, LB Travis, *et al.*, *Second Cancers among 40,576 Testicular Cancer Patients: Focus on Long-Term Survivors.* 97 J. NAT'L CANCER INST. 1354−1365 (2005); JD Tward, *et al., The Risk of Secondary Malignancies over 30 Years after the Treatment of Non-Hodgkin Lymphoma*, 107 CANCER 108-155 (2006); MJ Teta, *et al.*, *Therapeutic Radiation for Lymphoma: Risk of Malignant Mesothelioma*, 109 CANCER 1432-1438 (2007).

[4] B Price & A Ware, *Time Trend of Mesothelioma Incidence in the United States and Projection of Future Cases: An Update Based on SEER Data for 1973 through 2005*, 39(7) CRITICAL REVS. IN TOXICOLOGY 576-588 (2009). Price & Ware conclude that "not every occurrence of mesothelioma is necessarily the result of asbestos exposure. … [F]or the majority of mesothelioma cases where sufficient asbestos exposure cannot be ascertained, the cause of mesothelioma is unknown. These cases are classified as spontaneous or due to an unknown cause other than asbestos and are referred to subsequently as background cases." *Id.* at 577.

individuals in this country is about 100 million fibers.[5] There is no scientific evidence that these background levels of asbestos cause or contribute to the development of mesothelioma.

There are two types of asbestos fibers: serpentine (chrysotile) and amphibole (tremolite, actinolite, amosite, crocidolite, and anthophyllite).[6] Chrysotile is the *only type of asbestos* historically contained in any Georgia-Pacific joint compound (the Georgia-Pacific product Plaintiff claims Mr. Qurin was exposed to). The two fiber types have important mineralogical and structural differences that substantially influence toxicity.[7] Today, it is generally accepted that amphibole asbestos can cause mesothelioma: scientists agree that workers in some occupations – insulators, asbestos factory workers, shipyard workers – have a significantly increased risk of developing mesothelioma from occupational exposure to amphibole asbestos.[8] But there is no such consensus as to chrysotile. *See Nolan v. Weil-McLain*, 910 N.E.2d 549, 566 (Ill. 2009) ("plaintiff's own experts agreed that there is a scientific debate as to whether chrysotile can cause mesothelioma, and even if it can, they agreed that chrysotile is the least carcinogenic of the various asbestos fiber types"). The available scientific literature shows that exposures to low levels of chrysotile fibers do not increase the risk of mesothelioma. Epidemiological studies have found no elevated risk of mesothelioma among career drywall workers, who necessarily had much higher and frequent exposures than Mr. Quirin, who was a

[5] *See* Nat'l Research Council, *Asbestiform Fibers Non-Occupational Health Risk*, at 62 (Nat'l Acad. Press 1984).

[6] Victor L. Roggli, et al. (eds.), PATHOLOGY OF ASBESTOS-ASSOCIATED DISEASES, at 2 (New York, Springer Science+Business Media, Inc., 2d ed., 2004).

[7] Amphibole asbestos is recognized to be between 100 and 500 times more potent in causing mesothelioma than chrysotile. JT Hodgson & A Darnton, *The Quantitative Risks of Mesothelioma and Lung Cancer in Relation to Asbestos Exposure*, 44(8) ANN. OCCUP. HYG. 565-601 (2000).

[8] K Teschke, *Mesothelioma Surveillance to Locate Sources of Exposure to Asbestos*, 88 CANADIAN J. PUB. HEALTH 163, Table II (1997); AD McDonald & JC McDonald, *Malignant Mesothelioma in North America*, 46 CANCER 1650, 1653-54 (1980).

telephone installer and supervisor, not a drywall worker, ever could.[9]

B. Georgia-Pacific's Joint Compound

Georgia-Pacific first sold joint compounds with chrysotile in 1965, when it acquired the Gypsum Bestwall Company. Resp. to Irrogs. at 2 (**Ex. A**). In 1973, Georgia-Pacific began changing its joint compound formulations to remove chrysotile. *Id.* at 17. It ceased manufacturing chrysotile-containing products by 1977. *Id.* During the time Georgia-Pacific sold some joint compound products with chrysotile, they contained, at most, 7% chrysotile. *Id.* This low level of *chrysotile* stands in sharp contrast with materials used for insulating and fireproofing, many of which contained 95-100% *amphibole* asbestos. *See* Health Effects Inst.-Asbestos Research, *Asbestos in Public and Commercial Buildings* at 4-4 (1991).

C. Mr. Quirin's Alleged Exposures

Plaintiff alleges that Mr. Quirin was exposed to asbestos-containing products: (1) from 1953 to 1957, while serving as a Machinist Mate in the United States Navy aboard the USS Tolovana; (2) from 1953 to 1957, while smoking Kent cigarettes with Micronite filters; and (3) from 1957 to 1986, while working for Illinois Bell as a telephone installer and supervisor. Dep. of R. Quirin ("Quirin Dep.") at 14-16, 41-43, 167, 172 (**Ex. B**);

Mr. Quirin was not a drywall installer; in fact, he never used joint compound, either at work or at home. Instead, Plaintiff claims that Mr. Quirin occasionally worked near drywallers while installing phone lines or supervising their installation or repair. *Id.* at 78. He sometimes saw drywallers use USG or Georgia-Pacific joint compound, although he could not remember where, and he conceded that the normal sequencing of trades during construction isolated telephone installers from drywallers. *Id.* at 120-21, 173-74. Mr. Quirin's co-workers confirmed

[9] C Robinson, *et al.*, *Assessment of Mortality in the Construction Industry in the United States, 1984-1986*, 28(1) AM. J. OF INDUS. MED. 49-70 (July 1995).

that they usually would be done with their work before the drywall installers did theirs. Dep. of J. Williamson at 100-02 (**Ex. C**); Dep. of D. DiFazzio at 27 (**Ex. D**). During his employment with the phone company, Mr. Quirin also worked directly with asbestos-containing mastic/cement and sealants. Quirin Dep. at 64-68, 71.

In contrast to his alleged occasional and intermittent bystander exposures to chrysotile from joint compound, Mr. Quirin had substantial exposures to amphibole asbestos. From 1953 to 1957, Mr. Quirin was a Machinist Mate[10] on board the USS Tolovana, a World War II vessel. *Id.* at 14-18. He personally replaced asbestos, among other things, and was also near other sailors who did similar work. *Id.* at 20-36. Mr. Quirin testified that this work was dusty. *Id.* The insulation products on board Navy vessels usually contained high levels (90%) of amosite asbestos, and it is estimated that the Tolovana had more than 10 tons of amosite insulation. *See* Report of Thomas McCaffery ("McCaffery Rpt.") at 5 (**Ex. E**).

D. Plaintiffs' Experts' Causation Opinions

Plaintiff relies on Dr. Brodkin to prove causation. Report of Carl Brodkin ("Brodkin Rpt.") (**Ex. F**). In his report, Dr. Brodkin states that Mr. Quirin had "malignant pleural mesothelioma," causally related to all his alleged asbestos exposures. *Id.* at 48-55. In his deposition, Dr. Brodkin confirmed that he believes that Mr. Quirin's "cumulative exposure" resulted in his mesothelioma, stating that he did not "make a list of priority in terms of which one was more important," but rather thought all his alleged exposures were "significant components of Mr. Quirin's cumulative exposure." Dep. of C. Brodkin ("Brodkin Dep.") (**Ex G**) at 164-65, 167, 189 ("[M]esothelioma is a cumulative dose disease. You have to consider all the sources of exposure"). Dr. Brodkin could not estimate Mr. Quirin's dose of exposure from joint compound.

[10] The U.S. Navy identified Machinist Mates as the second most likely rank to develop asbestos-related diseases from the 20 specialties evaluated. *See* Report of Thomas McCaffery ("McCaffery Rpt.") at 8 (**Ex. E**).

In any event, such an estimate would be irrelevant to his causation opinions. *Id.* at 68-69.[11]

Plaintiff has also retained Arnold Brody to provide general causation testimony. Dr. Brody's report is not specific to this case. Report of Arnold Brody ("Brody Rpt.") at 6 (**Ex. I**). Dr. Brody is a cellular biologist who performs animal studies; he generally testifies about lung structure and the effect of inhaled asbestos fibers on the lungs of rats. He then extrapolates from his studies to opine that any exposure above background to any type of asbestos is a substantial contributing cause of mesothelioma:

> Once a person develops an asbestos-related cancer, it is not possible to exclude any of the person's above-background exposures to asbestos from the causal chain. From a scientific and biological point of view, each and every exposure to asbestos that an individual with mesothelioma experienced in excess of a background level contributes to the development of the disease.

Report of Arnold Brody in *McElroy v. 3M Corp.*, No. 24X10000289, Md. Cir. Ct., Baltimore City, at 7-8 (**Ex. J**). His opinions remain the same today. Brody Rpt. at 2 ("it is the total dose of asbestos, regardless of type, that the patient breathes that is the cause of the disease.").

III. ARGUMENT & CITATION OF AUTHORITY

A. The Standard for Admissibility of Expert Testimony

Federal Rule of Evidence 702 provides that:

> [A] witness qualified as an expert by knowledge, skill, experience, training, or education, may testify thereto in the form of an opinion or otherwise, if (1) the testimony is based upon sufficient facts or data, (2) the testimony is the product of reliable principles and methods, and (3) the witness has applied the principles and methods reliably to the facts of the case.

The proponent of the expert opinions bears the burden of proving its admissibility by a preponderance of the evidence. *Daubert*, 509 U.S. at 592 n.10. Further, any proffered expert opinion must meet Rule 703's requirement that the facts or data upon which the expert bases his

[11] Dr. Brodkin has previously been excluded from offering speculative testimony in another toxic tort case. *Ardesson v. Atlantic Richfield Co.*, 2005 Wash. App. LEXIS 853 at *34 (Wash. Ct. App. Apr. 26, 2005) (**Ex. H**).

opinion or inference be "of a type reasonably relied upon by experts in the particular field." FED. R. EVID. 703.

Under Rule 702, a district court has an obligation to act as gatekeeper to "ensure that any and all scientific testimony or evidence admitted is not only relevant, but reliable." *Daubert*, 509 U.S. at 589; *Myers v. Ill. Cent. R.R. Co*., 629 F.3d 639, 644-45 (7th Cir. 2010). This gatekeeper function requires a court to assess the reasoning and methodology underlying the opinion and determine whether it is both scientifically valid and relevant. *Daubert*, 509 U.S. at 592-93. "[W]here [an expert] testimony's factual basis, data, principles, methods, or their application are called sufficiently into question[,] … the trial judge must determine whether the testimony has 'a reliable basis in the knowledge and experience of [the relevant] discipline.'" *Kumho Tire Co. v. Carmichael*, 526 U.S. 137, 149 (1999). While a party "need not prove that the expert is undisputably correct or that the expert's theory is 'generally accepted' in the scientific community," the proponent of the opinion testimony must show that the methods employed by the expert in reaching his conclusions are scientifically sound and that the opinion is based on facts which satisfy Rule 702's reliability requirements. "A court may conclude that there is simply too great an analytical gap between the data and the opinion proffered." *Gen. Elec. Co. v. Joiner*, 522 U.S. 136, 146 (1997) (the court may exclude an opinion "which is connected to existing data [only] by the *ipse dixit* of the expert.").

In assessing reliability, the court may consider whether the opinion: (1) can be and has been tested; (2) has been peer reviewed; (3) has a known rate of error; and (4) has been accepted in the scientific community. *Daubert*, 509 U.S. at 593-94. If the expert's testimony fails to satisfy any of these factors, the testimony is unreliable and must be excluded. *In re Meridia Prods. Liab. Litig.*, 328 F.Supp.2d 791, 805-06 (N.D. Ohio 2004). Several courts have

considered a fifth factor: whether the opinions were developed for litigation, particularly where the opinions have not been subjected to the peer review process. *Daubert v. Merrell Dow Pharms., Inc.*, 43 F.3d 1311, 1317 (9th Cir. 1995).

B. The "Each and Every Exposure" Opinion Is Unreliable and Inadmissible

1. The "Each and Every Exposure" Theory Has Been Excluded by Numerous Other Courts

The faulty "each and every" exposure theory offered by Drs. Brodkin and Brody has been excluded and criticized by an ever-increasing number of courts.

In *Sclafani v. Air & Liquid Systems Corp.*, 2013 WL 2477077 (C.D. Cal. May 9, 2013) (**Ex. K**), the court excluded Dr. Brody's testimony, in part because his "every exposure" opinion "would render the 'substantial factor' prong of the causation test meaningless. If 'each and every exposure' is a *substantial factor* in leading to the development of mesothelioma, then all a plaintiff would have to do is prove 1) that he had mesothelioma; and 2) that he was exposed to asbestos at some time." *Id.* at *4 (citing *Lindstrom v. A-C Prod. Liab. Trust*, 424 F.3d 488, 492-3 (6th Cir. 2005); *Holcomb v. Georgia-Pacific LLC*, 289 P.3d 188, 197 (Nev. 2012)). Similarly, a federal court in Utah held that nearly identical "each and every exposure" expert testimony was inadmissible under *Daubert* because the theory cannot be tested and has no known error rate, and because plaintiff's experts could point to no studies "showing that the type of exposure [plaintiff] had to Defendants' products is likely to cause mesothelioma." *Anderson v. Ford Motor Co.*, -- F. Supp. 2d --, 2013 WL 3179497, at *6 (D. Utah June 24, 2013) (**Ex. L**); s*ee also Smith v. Ford Motor Co.*, 2013 WL 214378 (D. Utah Jan. 18, 2013) (excluding every exposure testimony because it is not based on sufficient facts/data, relies on irrelevant studies, and ignores relevant literature) (**Ex. M**); *Wannall v. Honeywell Int'l Inc.*, -- F.R.D. --, 2013 WL 1966060, at *17 (D.D.C. May 14, 2013) (**Ex. N**) (plaintiffs' experts' "no safe level" opinion held to be

insufficient to prove causation).

Similarly, the Pennsylvania Supreme Court ruled conclusively that the "each and every exposure" theory is not based on sound science and was properly excluded. *Betz v. Pneumo Abex LLC*, 44 A.3d 27, 56 (Pa. 2012). The court explained that the "any-exposure opinion is in irreconcilable conflict with itself. Simply put, one cannot simultaneously maintain that a single fiber among millions is substantially causative, while also conceding that a disease is dose responsive." *Id.* at 56. *See also Butler v. Union Carbide Corp.,* 712 S.E.2d 537, 552 (Ga. App. 2011) (expert testimony that each exposure to any asbestos fiber above background contributed to plaintiff's disease inadmissible under *Daubert*), *cert. denied* (Oct. 17, 2011). Numerous other courts have agreed, both in asbestos and other toxic tort cases.[12]

As all these courts have recognized, the each and every exposure opinion that Drs. Brodkin and Brody are ready to offer here has no scientific or logical foundation. It contradicts the scientific research that consistently shows vast differences in risk between different exposure settings; fails to explain why "background" levels of asbestos carry no risk, while comparable levels of exposure to a defendant's product do present a risk; and fails to reliably account for other critical data with respect to an individual plaintiff (*i.e.*, exposure history, the settings in

[12] *See Moeller v. Garlock Sealing Techs.*, 660 F.3d 950 (3d Cir. 2011); *Wills v. Amareda Hess Corp.*, 379 F.3d 32 (3d Cir. 2004); *Bartel v. John Crane, Inc.,* 316 F. Supp. 2d 603, 605 (N.D. Ohio 2004)*; In re Asbestos Litig.*, 2008 Phila. Ct. Com. Pl. LEXIS at 102-103; *Borg-Warner Corp. v. Flores,* 232 S.W.3d 765, 774 (Tex. 2007); *Gregg v. V-J Auto Parts, Inc.*, 943 A.2d 216 (Pa. 2007); *Stephens*, 239 S.W.3d at 312-21; *In re W.R. Grace*, 355 B.R. 462, 474 (Bankr. Del. 2006); *Brooks v. Stone Architecture*, 934 So. 2d 350, 355-56 (Miss. App. 2006); *Martin v. Cincinnati Gas & Elec. Co.*, 561 F.3d 439 (6th Cir. 2009); *Lindstrom*, 424 F.3d 488; *Smith v. Kelly-Moore Paint Co.*, 307 S.W.3d 829 (Tex. App. 2010); *Daly v. Arvinmeritor, Inc.*, 2009 WL 4662280 (Fla. Cir., Broward Cnty. Nov. 30, 2009)(**Ex. O**); *In re Asbestos Litig.*, 2004 WL 5183959 (Tex. Dist. Ct., Harris Cnty. Jan. 20, 2004)(**Ex. P**); *In re Asbestos Litig.*, 2007 WL 5994694 (Tex. Dist. Ct., Harris Cnty. July 18, 2007)(**Ex. Q**); *In re Toxic Substances Cases*, 2006 WL 2404008 (Pa. Ct. Com. Pl. Aug. 17, 2006)(**Ex. R**); *Basile v. Am. Honda Motor Co.*, 2007 WL 712049 (Pa. Ct. Com. Pl. Feb. 22, 2007)(**Ex. S**); *Anderson v. Asbestos Corp.*, No. 05-2-04551-5 SEA (Wash. Super. Oct. 31, 2006) (Tr. of Bench Ruling at 144-45)(**Ex. T**); *Free v. Ametek*, 2008 WL 728387 (Wash. Super. Feb. 29, 2008)(**Ex. U**); *see also Cano v. Everest Mineral Corp.*, 362 F. Supp. 2d 814, 816 (W.D. Tex. 2005); *Polaino v. Bayer Corp.*, 122 F. Supp. 2d 63, 70 (D. Mass. 2000); *Pluck v. B.P. Oil Pipeline Co.*, 640 F.3d 671 (6th Cir. 2011); *Parker v. Mobil Oil Corp.*, 857 N.E.2d 1114 (N.Y. 2006); *Henricksen v. ConocoPhillips Co.*, 605 F. Supp. 2d 1142 (E.D. Wash. 2009); *Newkirk v. ConAgra Foods, Inc.*, 727 F. Supp. 2d 1006 (E.D. Wash. 2010).

which exposures occurred, *etc*.). *See Betz*, 44 A.3d at 55-58. This theory is simply an unproven and unprovable hypothesis invented to perpetuate asbestos litigation. *Butler*, 712 S.E.2d at 552.

2. Dose Is Irrelevant to Plaintiff's Experts' Causation Opinions

If allowed, Drs. Brodkin and Brody will theorize that any exposure to any form of asbestos above background is a substantial contributing cause of mesothelioma — no matter the dose. The failure to attribute any significance to this critical component of the well-recognized, accepted methodology in the scientific disciplines of toxicology and epidemiology renders their causation opinions inherently unreliable.

Drs. Brodkin and Brody ignore that the "dose makes the poison," the fundamental tenet of toxicology. This proposition holds true for all known substances, including common ones like water and salt.[13] Without accounting for dose, Plaintiff's experts' causation opinions are nothing but unsubstantiated personal (not scientific) opinions. *See Betz*, 44 A.3d at 56. Plaintiff may not present speculative, misleading expert evidence to the jury without some meaningful quantification of exposure, or dose-response estimate. Plaintiff's experts, however, opine that any alleged exposure to an asbestos-containing product manufactured by any named defendant, no matter how vague or lacking in detail, is sufficient to support their causation opinion. That is simply *not* the law, not in asbestos cases or in any other type of toxic tort case. *See, e.g.*, *Henricksen*, 605 F. Supp. 2d at 1161-62, 1165-66 (collecting cases rejecting the "no threshold" theory as one at odds with the proposition that "the dose makes the poison"). Indeed, Dr. Brodkin never even considered the dose of Georgia-Pacific joint compound, if any, Mr. Quirin received from his alleged exposures because he assumes that all exposures (except possibly

[13] *See Betz*, 44 A.3d at 40 ("Great volumes of water may be harmful, greater volumes or an extended absence of water can be lethal; moderate amounts of water, however, are healthful. In short, the poison is in the dose."). The Court should apply the same standards here that are applied to analyze causation evidence in toxic torts involving other substances. *See Parker*, 857 N.E.2d at 1121-22; *Amorgianos v. Nat'l R.R. Passenger Corp.*, 137 F. Supp. 2d 147 (E.D.N.Y. 2001); *Merrell Dow Pharms., Inc. v. Havner*, 953 S.W.2d 706, 720 (Tex. 1997).

background exposures) are "significant contributing factors" to the development of mesothelioma. If even one witness testifies that Mr. Quirin was exposed to a defendant's asbestos-containing product at least once, Plaintiff's experts are willing to attribute a causal role to that product without a shred of additional information.

The question before this Court is whether an expert's causation opinion that ignores the dose of a plaintiff's exposure to an alleged toxin is sufficiently reliable, and therefore admissible, where the disease process at issue is acknowledged to follow fundamental principles of dose-response. It is not. This Court should exclude Plaintiff's experts' testimony.

3. Plaintiff's Experts Ignore Differences in Fiber Potency

As mentioned above, chrysotile is the ***only fiber type*** historically contained in some Georgia-Pacific joint compound formulations. Chrysotile and amphibole asbestos fibers have significant differences in properties and toxicity. *See Gideon v. Johns-Manville Sales Corp.*, 761 F.2d 1129, 1145 (5th Cir. 1985) ("all asbestos-containing products cannot be lumped together in determining their dangerousness"); *Celotex Corp. v. Copeland*, 471 So.2d 533, 538 (Fla. 1985) ("Asbestos products … have widely divergent toxicities, with some asbestos products presenting a much greater risk of harm than others"); *Case v. Fibreboard Corp.*, 743 P.2d 1062, 1066 (Okla. 1987) ("the degree of risk arising from exposure to asbestos may differ not only depending on the form of the mineral encountered but on the form of the product in which it is encountered"). Today, it is generally accepted that amphibole asbestos can cause mesothelioma. In contrast, despite scores of studies on the human health effects of asbestos exposure spanning many years and a variety of products and occupations, there is a continuing and vigorous debate in the scientific community about whether chrysotile can cause mesothelioma. There are no published peer-reviewed studies that show either a causal connection between exposure to low levels of chrysotile fibers and mesothelioma or an elevated risk of developing mesothelioma among career

drywall workers. Several epidemiological studies of construction industry workers have found no mesothelioma deaths in drywall workers.[14]

While the scientific community agrees that chrysotile is significantly less potent in causing mesothelioma than amphibole asbestos, and Dr. Brodkin concedes as much, Brodkin Dep. at 41, Dr. Brodkin refuses to consider this difference when rendering his opinions, *id.* at 43-44. Plaintiff's experts' opinions rejecting well-established science does not meet the *Daubert* standard for admissibility.

4. Plaintiff's Experts Improperly Ignore Relevant Epidemiology

Epidemiological studies have found no elevated risk of mesothelioma among career drywall workers. The scientific literature also shows that exposures to low levels of chrysotile fibers do not increase the risk of mesothelioma. The failure to consider the available epidemiology, in itself, renders the causation opinions proffered by Plaintiff inadmissible. Epidemiology, when available, is the gold standard in proving causation and cannot be ignored. *See Norris v. Baxter Healthcare Corp.*, 397 F.3d 878, 882 (10th Cir. 2005) ("epidemiology is the best evidence of general causation in a toxic tort case. … [W]here epidemiology is available, it cannot be ignored. As the best evidence of general causation, it must be addressed."); *see also In re Breast Implant Litig.*, 11 F. Supp. 2d 1217, 1224-25 (D. Colo. 1998) (discussing the primacy of epidemiological evidence); *Renaud v. Martin Marietta Corp.*, 749 F. Supp. 1545, 1554 (D. Colo. 1990) (epidemiology is required in toxic tort cases "where collection of such evidence is possible"). Neither Dr. Brodkin nor Dr. Brody consider the available relevant epidemiology.

[14] *See* NIOSH, *Mortality by occupation, industry, & cause of death. 24 reporting statues (1984-1988)*, NIOSH Publ. No. 97-114 (1997); HJ Lipscomb & JM Dement, *Respiratory diseases among union carpenters: cohort and case-control analyses*, 33 AM. J. INDUS. MED. 131 (1998); E Wang *et al.*, *Mortality among North Carolina construction workers, 1988-1994*, 14 APPLIED OCCUP. & ENVT'L HYG. 45 (1999); K Steenland & S Palu, *Cohort mortality study of 57,000 painters & other union members: a 15 year update*, 56 OCCUP. & ENVT'L MED. 315 (1999).

5. Plaintiff's Experts Improperly Rely on Regulatory Standards

Plaintiff's experts will ignore the relevant epidemiology, and rely instead on pronouncements of governmental or quasi-governmental public health agencies. *See, e.g.*, Brodkin Dep. at 151. Plaintiff should not be allowed to use her expert witnesses to introduce these inadmissible materials through the back door.

It is inappropriate to import regulatory standards into civil tort litigation, where the critical inquiry is proximate causation. Regulatory standards are generally based on risk assessments and an incomplete data set, in an effort to make conservative public health decisions. Because regulatory decisions are based on the "precautionary principle" – *i.e.*, designed to be most protective of those who may be exposed – agencies charged with the responsibility for environmental and worker protection cannot wait for conclusive medical and scientific causation evidence before pursuing protective regulatory policies. Administrative agencies "may make regulatory decisions . . . based on postmarketing evidence that gives rise to ***only a suspicion of causation***." *Matrixx Initiatives, Inc. v. Siracuso*, 131 S. Ct. 1309, 1320 (2011) (emphasis added); *Betz*, 44 A.3d at 55; *Free*, 2008 WL 728387 ("regulatory standards are not probative of scientific analysis or acceptance in the scientific community"); *Parker*, 793 N.Y.S.2d at 438 ("plaintiff's reference to regulatory standards … was not compelling evidence, as such standards are not measures of causation but rather are public health exposure levels determined by agencies pursuant to statutory standards set by the United States Congress"). Courts distinguish between the "reasonably lower threshold of proof" for regulatory risk assessment models and the threshold necessary to prove causation in a tort case. *Allen v. Penn. Eng'g Corp.*, 102 F.3d 194, 198 (5th Cir. 1996) (agencies' threshold of proof is reasonably lower than in tort law, which "traditionally make[s] more particularized inquiries into cause and effect" and requires the Plaintiff to prove "that it is more likely than not that another individual has

caused him or her harm"); *Sutera v. Perrier Group of Am., Inc.*, 986 F. Supp. 655, 664-65 (D. Mass. 1997) ("a regulator's purpose is to suggest or make prophylactic rules governing human exposure … from the preventive perspective that agencies adopt in order to reduce public exposure to harmful substances").

Moreover, while experts may rely on hearsay in reaching their opinions, there is "a presumption against disclosure to the jury of [inadmissible] information used as the basis for an expert's opinion . . . when that information is offered by the proponent of the expert." 4 Weinstein's *Federal Evidence* §703.05 (2d ed. 2003). Only when the prejudice occasioned by exclusion of the inadmissible underlying data would substantially outweigh the ability of the data to assist the jury in evaluating the expert's testimony should the data be admitted. *Id. See also United States v. Mejia*, 545 F.3d 179, 197 (2d Cir. 2008) ("The expert may not … simply transmit … hearsay to the jury"). Even if Plaintiff's experts purport to rely on regulatory materials, they still should not be allowed to testify about them. While an expert witness may rely on underlying relevant and reliable scientific studies, and may discuss those studies in his testimony to the jury, he cannot "bolster" his own opinions by claiming the support of federal regulators and public health organizations.

6. Plaintiff's Experts Rely on Irrelevant Scientific Studies

The "each and every exposure" theory is based on irrelevant epidemiological studies which do not consider the low-dose chrysotile exposures allegedly at issue here. It is improper for an expert to rely on studies that involve either (a) industries with massive exposures to chrysotile fibers, such as mines or textile or cement plants; (b) amphibole asbestos cohorts; or (c) mixed fiber exposures. These irrelevant studies, which plaintiffs' experts routinely rely on in asbestos litigation, do not involve joint compound workers, or the low, limited, and intermittent exposures to chrysotile alleged in this case.

Causation opinions based on studies of high exposures that are very different from the exposures at issue or exposures to different fiber types are generally considered unreliable and inadmissible. In particular, "extrapolating down" from conclusions reached in studies with very high exposures is not a generally accepted methodology. *Betz*, 44 A.3d at 48 n.21; *Parker*, 857 N.E.2d at 1121-22 (refusing to allow experts to "extrapolate down" from high dose studies that plaintiff's leukemia was caused by low-level, undefined benzene exposures in gasoline).

In the present case, Dr. Brodkin made no effort to estimate exposure and risk, or to ascertain that Mr. Quirin's alleged exposure to chrysotile from Georgia-Pacific joint compound was comparable to the high level exposures found in the scientific literature he cites – because it so obviously was not.[15] Plaintiff's "each and every exposure" or "cumulative exposures" theory is in truth a transparent attempt to transfer her burden of proof to the Defendants. Because Drs. Brodkin and Brody rely heavily on irrelevant regulatory standards and inapplicable studies, have ignored the relevant epidemiology that is available, and have disregarded the basic toxicological principle of dose-response and the crucial differences in fiber potency, their proposed testimony should be excluded pursuant to *Daubert* and its progeny.

IV. CONCLUSION

For the foregoing reasons, Georgia-Pacific respectfully requests that this Court exclude any expert testimony that each and every exposure to chrysotile fibers from Georgia-Pacific joint compound was a substantial contributing factor in causing Mr. Quirin's disease.

[15] Georgia-Pacific's expert industrial hygienist James Rock has estimated that Mr. Quirin's range of exposure to Georgia-Pacific joint compound was, at most, 0.00024 to 0.19 fiber-years/mL, which is "mathematically and epidemiologically equivalent to zero." Report of James Rock at 22, 25 (**Ex. V**).

Dated: August 1, 2013

Respectfully submitted,

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IN THE UNITED STATES DISTRICT COURT
FOR THE NORTHERN DISTRICT OF ILLINOIS
EASTERN DIVISION

MARILYN F. QUIRIN, as Executor of the Estate of RONALD J. QUIRIN, Deceased,	)	
Plaintiff,	)	
v.	)	Civil Action No. 1:13-cv-02633
LORILLARD TOBACCO CO., et al.,	)	Judge Joan B. Gottschall
Defendants.	)	

CERTIFICATE OF SERVICE

I hereby certify that on August 1, 2013, I electronically filed Georgia-Pacific LLC's Motion *in Limine* No. 1 with this Court's ECF system, which will send notification of this filing to all counsel of record.

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